UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,463	07/26/2004	Burkhard Bustgens	158.002	4000

7590 10/30/2008

Jackson Patent Law Office
Suite 100
211 North Union Street
Alexandria, VA 22314

EXAMINER	
LOUIE, MANDY C	
ART UNIT	PAPER NUMBER
1792	
MAIL DATE	DELIVERY MODE
10/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/502,463	BUSTGENS, BURKHARD	
	Examiner	Art Unit	
	MANDY C. LOUIE	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-60* is/are pending in the application.

4a) Of the above claim(s) *45-47* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *21-44 and 48-60* is/are rejected.

7)☐ Claim(s) *39* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/05/08, 02/19/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of claims 21-44, 48-60 in the reply filed on 08/30/08 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Objections

1. Regarding claim 39, the term "positions" should be corrected to "a position". Appropriate correction required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 21-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Regarding claim 21, the term "a building or public or civil engineering work" is indefinite in what the surface can encompass. For example, is the surface "of a public engineering work" or "of a public," which is missing an essential element of the limitation. Clarification is required. Any subsequent

dependent claims of the instant claim will also be rejected under second paragraph of 35 U.S.C. 112.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. The instant claims are drawn to a method of applying a design with an application device by positioning a stationary component; receiving first data of a surface of a building or civil engineering work; generating a second data by using the first data and a data of a corresponding design; moving the application device on the surface; measuring a position of a non-stationary component relative to the stationary component, where the non-stationary component is attached to the application device; measuring a movement of an application device **if** the step of measuring a position is unable to provide valid position data; and controlling the paint application elements by

selecting a portion of the second data, the portion selected being determined by measuring steps to apply paint on the surface that has not been painted according to the second data. Subsequent limitations will further be disclosed.

4. Claims 21-29, 31, 33-35, 37-41, 44, 48-49, 52-56, 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saund [US 2002/0171731A1] in view of Tideman, Jr. [US 6467978].

Regarding claim 21, Saund teaches a hand-held printer invention that comprises a marking mechanism (application device), a position sensing system, and a control mechanism [abstract], where the invention includes methods for hand-held printing a stored image on a surface (applying a design) [0007] and the marking mechanism comprises (marking) elements (application elements) [0043]. Saund further teaches positioning a color video camera (i.e. mounted above the whiteboard (surface)) (positioning a stationary component) where the camera image can be translated to the coordinate system of the whiteboard by means of monitoring the position of the marking mechanism (receiving first data corresponding to the surface) [0056-0059], and an image data signal (second data) is generated by the control mechanism based on the stored image (design) and position of the marking mechanism (first data) [0033]. Furthermore, the marking mechanism is moved over a surface of a whiteboard (moving application device on the surface) [0040; 0045], where the fiducial markings (254, 256) (non-stationary component) facilitate the location and tracking of the marking mechanism within the filed of vision of the camera (stationary component) (measuring a position of a non-stationary component relative to the stationary component), where the

fiducial markings are located on the print head portion of the marking mechanism (non-stationary component being attached to the application device) [0057]. It would have been apparent to one with ordinary skill in the art that the marking mechanism would be subsequently moved to area of the surface that is desirable have the image be drawn on or to a starting point that would optimize the mobility of the marking mechanism to start the marking process. Saund discloses the control mechanism using the positional information (and stored image) to determine the portion of the image data (second data) that is to be reproduced on the corresponding portion of the whiteboard surface to actuate the marking mechanism (hence, also marking elements) appropriately as the marking mechanism is moved over the surface of the whiteboard (controlling application elements by selecting a portion of the second data where the portion is determined by the measuring step) [0040]. Wherein, a marking element (application element) is not actuated if previously actuated (wherein paint is not applied at positions already been fully painted) [0050]. Since the prior art does not indicate the step of measuring a position would be unable to provide valid position data, the step of measuring a movement of the application device would not be necessitated. For additional information; however, Saund does teach providing a mechanical technique to augment the image-base information about the position of the marking mechanism, where rotary encoders capable of measuring the rotation of wheels provided on the marking mechanism (measuring movement of application device) to improve the estimate of the instantaneous position of the marking device [0061]. Although the prior art indicates that the method of the invention may be applied to wide variety of surfaces and media other

than the specific embodiment of a whiteboard-based system as well as the marking mechanism may be any suitable device of reproducing the image on a desirable surface [0031; 0038], Saund fails to specifically teach the application device painting onto a building or civil engineering work. Tideman, Jr. teaches this deficiency.

Regarding claim 21, Tideman, Jr. teaches a system for painting an image on a large surface, such as the external wall of a building [abstract], where a medium head assembly is provided for delivering a medium used to create the image on the desired surface [col 2, ln 5-7] and a computer is provided to store the image and control the system [col 1, 61-67].

It would have been obvious to one with ordinary skill in the art at the time of the invention to have the application device taught by Saund be modified with the application elements (i.e. airbrushes) Tideman Jr. to paint the surface of a building. One would have been motivated to do so to develop a method that can reproduce an exact or enlarged copy of the image, text or graphic on any large surface in a quick and economical fashion [Tideman Jr., col 1, ln 35-40] which would be suitable and durable for painting the surface of an outdoor structure while being portable and maneuverable by the user, in addition to being able to detect the position of the application device in real time to effectively control and monitor the reproduction of the image on a large surface.

Regarding claims 48 and 53, teaching of Saund in view of Tideman, Jr are taught as in claim 21 and further meets the limitations of claims 48 and 53.

Regarding claims 22-23, Saund in view of Tideman Jr. teaches measuring the position of the marking mechanism between a transmitter (non-stationary) located on the marking mechanism and a transducer (stationary component), where the transmitter and transducer is of an ultrasound position system (sound, wave propagation time in light of applicant's specification) [Saund, 0066].

Regarding claims 24, 27, 41, 56, Saund in view of Tideman Jr. teaches using at least one camera that can be located on the marking mechanism (application unit) as part of the position sensing system to read glyph marks (features, reference pattern) on the surface to provide position data [Saund, 0063-0065]. The provided glyph marks are used to give positional data on the marking mechanism [Saund, 0062], and are compensated by the sensor (camera) to generate positional data [Saund, 0065] which in return, the provided positional data with the stored image data would produce an image signal (second data) to reproduce an image onto the desired surface [Saund, 0033].

Regarding claim 25, Saund in view of Tideman Jr. teaches measuring a position by observing the positional information of the surface from a sensor (Outside-In method or Inside-Out method) or with other various means for determining a position [0056, 0064-0067].

Regarding claims 21, 26, 28-29, 30-31 since the teaching of the prior art do not teach where a position is unable to be measured, the step of measuring a movement would not be relied and any actions depended upon this condition would not be

necessitated. However, further information taught by the prior art will be provided in regards to some of these claims.

Regarding claim 26, Saund in view of Tideman Jr. also teaches the position sensing system may include velocity information [Saund 0045]. It would have been apparent to one with ordinary skill in the art that the marking mechanism which comprises wheels that would provide linear movements or rotational movements would permit the marking mechanism to move at either a linear or rotational velocity.

Regarding claim 28, Saund in view of Tideman, Jr. teaches rotary encoders are capable of measuring the rotation (movement) of the marking mechanism to assist in processing the image based information to the control unit for positional values of the marking mechanism [Saund, 0061], where measuring the movement of the marking mechanism can be performed in conjunction with measuring the position of the marking mechanism with a sensor [Saund, 0061]. Therefore, if the sensor is inoperative (insufficient measurement rate) while the marking mechanism continues to moves on the surface; it would have been apparent that the movement of the marking mechanism would continue to be measured by the rotary encoders to produce positional data since both measuring devices should be operating at the same time.

Regarding claim 29, teaching of Saund in view of Tideman, Jr. is aforementioned as in claim 21, 28, and where the sensor is an optical scanning system [Saund 0067] where measuring a position with such sensor and measuring a movement with rotary encoders are performed at the same time to assist in determining a position of the marking mechanism; it would have been apparent to one with ordinary skill in the art

that if the sensors are inoperative, the encoders would still be able to measure a movement of the marking mechanism and provide position information to the control unit.

Regarding claim 31, teaching of Saund in view of Tideman, Jr. is aforementioned as in claim 21, 28 for the condition of a position not being sufficiently evaluated. Saund in view of Tideman, Jr. teaches the marking element may be suppressed from printing on the surface by initializing the surface element to read as "white_pixel" and "off_the_image" [Saund, 0044]

Regarding claim 33, Saund in view of Tideman, Jr. teaches the application device comprises wheels (rolling element) which are in contact with the surface [Saund, 0060; Tideman, Jr., col 4, ln 26-32; Fig. 2].

Regarding claim 34, Saund in view of Tideman, Jr. teaches an application device (60) which has a plurality of airbrushes (paint application elements), more specifically five airbrushes (66) that is arranged laterally and protrudes over a rolling element (57) [Tideman, Jr., Fig. 1, Fig. 2], where the spray from each airbrush converge and intersects at a focal point (98) to print a pixel [Tideman, Jr., col 2, ln 28-29] on a surface; and where the arrangement of the airbrushes overlap the surface of the pixel [Tideman, Jr. col 4, ln 58-65; Fig 6-7]. It would have been apparent to one with ordinary skill in the art that the after printing one pixel (previously applied wet paint) and moving onto an adjacent location to print the next pixel for a continuous picture such as portrayed in Fig. 1, the airbrushes would overlap the first pixel (previous applied wet paint) during the printing process.

Regarding claim 35, Saund in view of Tideman Jr. teaches the paint application elements may be air brushes which are supplied with (compressed) air for spraying onto the surface [Tideman Jr., col 5, ln 3-21; col 2, ln 19-21].

Regarding claim 37, Saund in view of Tideman Jr. teaches a delay may occur from the time the image is communicated to the time they are painted on the surface; hence, it would necessitated to communicate ahead of the current location of the nozzles (application element) to determine a movement of the marking mechanism by the position sensing system [Saund, 0068].

Regarding claims 38, 40, Saund in view of Tideman Jr. teaches a camera (stationary component) is calibrated such that locations of the coordinate system of the camera image (recorded image) can be translated into coordinates of the surface (first data) by using projective geometry (physical characteristic) [Saund, 0056].

Regarding claim 39, Saund in view of Tideman Jr. teaches a position of a transmitter (non-stationary component) relative to the mounted transducer (stationary component) is measured by four transducers (a plurality of stationary components) [Saund, 0066].

Regarding claim 44, Saund in view of Tideman Jr. teaches moving a stationary component in way that allow the position of the marking mechanism (comprising non-stationary component) be measured relative to sensors (i.e. transducers) (stationary component) within a surface [Saund, 0066]. It would have been apparent to one with ordinary skill in the art to move the sensors to cover a smaller area of the surface (subportion) while measuring the position of the non-stationary component in order to

print upon only a section of a large surface; this would enable the operator to work on smaller areas of a large surface while reducing the amount of obstacles that would interfere with the position sensing system.

Regarding claim 49, teaching of Saund in view of Tideman, Jr are taught as in claim 40 and further meets the limitations of claim 49.

Regarding claim 52, teaching of Saund in view of Tideman, Jr. are taught as in claim 40 and further meets the limitations of claim 52, where the first position of the component is a camera mounted above the surface [Saund, 0056].

Regarding claims 54 and 55, Saund in view of Tideman, Jr. teaches rotary encoders are capable of measuring the rotation (movement) of the marking mechanism to assist in processing the image based information to the control unit for positional values of the marking mechanism [Saund, 0061], which would be used to generate (and select) the image data signal (second data) based upon those positional values [Saund, 0033]. The prior art teaches that the measuring the movement of the marking mechanism can be performed in conjunction with measuring the position of the marking mechanism with a sensor; both steps used to find the position of the marking mechanism to generate second data [Saund, 0061]. Therefore, if the sensor is inoperative (sensing a position is inoperative) while the marking mechanism continues to moves on the surface; it would have been apparent that the movement of the marking mechanism would continue to be measured by the rotary encoders since both measuring devices should be operating at the same time.

Regarding claim 59-60, Saund in view of Tideman, Jr. teaches a controlling step of whether the current location of the marking element is greater than the threshold distance of the last location of the marking mechanism (S800), where a current-state array (first data) include three entries (of white-pixel, black-pixel-need-to-fire, black-pixel), where current-state array is generated before and after the controlling step to generate a location of the image field for each surface element (S1100) (second data) [Fig. 2] to promote quality control; where the determination of the elements runs in a cycle (continuously) [Saund 0048] until all the elements are determined for marking the surface.

Again, it would have been obvious to one with ordinary skill in the art at the time of the invention to have the application device taught by Saund be modified with the application elements (i.e. airbrushes) Tideman Jr. to paint the surface of a building. One would have been motivated to do so to develop a method that can reproduce an exact or enlarged copy of the image, text or graphic on any large surface in a quick and economical fashion [Tideman Jr., col 1, ln 35-40] which would be suitable and durable for painting the surface of an outdoor structure while being portable and maneuverable by the user, in addition to being able to detect the position of the application device in real time to effectively control and monitor the reproduction of the image on a large surface.

5. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saund in view of Tideman, Jr., further in view of Yamada [US 5927872].

Teaching of Saund in view of Tideman, Jr. is aforementioned, but fails to teach providing a message to an operator when the step of measuring a position is valid.

Additional information is provided for claim 30 further in view of Yamada.

Regarding claim 30, Yamada teaches a hand-held printer having optical sensors for tracking position of the hand-held printer [abstract], where a light indicator can be designed to turn "on" to continue the printing process or turn "off" as an error signal to the user during the printing process (generate messages for an operator) on the correct print medium (valid position) [col 4, ln 43-62].

It would have been obvious to one with ordinary skill in the art at the time of the invention to apply Yamada with Saund in view of Tideman, Jr. in order to provide a message to the operator during the printing process (which included sensing a position). One would have been motivated to do so to be notified of errors (i.e. wrong position or surface, misfiring, etc.) that may occur during the printing process and print upon surfaces where it is only desired.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saund in view of Tideman, Jr., further in view of Jinno et al. [US 5525027]

Teaching of Saund in view of Tideman, Jr. is aforementioned, but fails to teach the application device is moved manually by an autonomous robot or cable (claim 32), Jinno et al. teaches this deficiency.

Regarding claim 32, Jinno et al. teaches a working apparatus with a robot arm [Fig. 1] that can be manually operated with a joystick to reach a desirable position of the working surface to perform a painting work [col 6, ln 46-57].

It would have been obvious to one with ordinary skill in the art to use a robot arm taught by Jinno et al. to paint a large surface (i.e. a tall building); one would have been motivated to do so in order to perform painting work upon areas that are difficult to reach normally and be customized with a manual option.

7. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saund in view of Tideman, Jr., further in view of Matt et al. [US 6045871].

Teaching of Saund in view of Tideman, Jr. are aforementioned, but fails to teach different coating materials are applied by the application device in parallel, where the coating materials include a ground coat, a conversion coat, or a fixing coat. Matt et al. teaches this deficiency.

Regarding claim 36, Matt et al. teaches a method of producing an opaque adherent coating on a surface of a cementious substrate [abstract], where a cementious substrate is of a exterior of a building wall [col 1, ln 13-14], and a sealer (primer) layer (ground coat) is applied to the cementious substrate before a top coat, such as a latex paint, is applied thereon [col 2, ln 5-8]. It would have been obvious to one with ordinary skill in the art that the application device would be parallel to the surface of which a design is applied thereon so that the liquid material would be applied to the surface evenly and uniformly creating an improved design on the targeted surface. It would have been apparent to one with ordinary skill in the art that the aqueous sealer composition [col 2, ln 40-43] would be capable of being applied to the building surface by means of any conventional liquid delivery means (i.e. spraying).

It would have been obvious to one with ordinary skill in the art at the time of the invention to have the application device of Saund in view of Tideman, Jr. apply coating materials such as a primer (ground coat) as taught by Matt et al. to the surface of a building prior painting a design coating. One would have been motivated to do so to avoid the mottled or blotchy appearance of a coating applied onto a surface of a building and to improve the adhesion of a paint coating to the building surface [Matt et al. col 2, ln 3-22] and extend the weatherability or protection of the surface [Matt et al. col 9, ln 26-30].

8. Claims 42-43, 50-51, 57-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saund in view of Tideman, Jr., further in view of Suenaga [US 3553371].

Teaching of Saund in view of Tideman, Jr. are aforementioned and further teaches any suitable combination of transmitter and transducer, either known or hereafter developed, and suitable arrangement combination of the transmitter and transducer may be used [Saund, 0066] and the invention also contemplates using optical scanning technology [Saund, 0067], but fails to explicitly teach detecting a color to generate the first data and second data (claims 42-43, 50-51), more specifically using a photoelectric transducer to generate color data that is incorporated into the second data. Suenaga teaches these deficiencies.

Regarding claims 42-43, 50-51, 57-58, Suenaga teaches a method for enlarged multicolor printing [abstract], where a number of photoelectronic transducer elements are provided for the optical system as detecting means [col 3, ln 31-33], where the

optical system is used to detect colors of the original (image), which is converted into information and used to print different colors onto a larger surface for an enlarged image [col 3, ln 10-19]. Positional data for the printing heads (second data) are determined by the optical system by detecting color [col 3, ln 10-19]. The original image data can be stored into a suitable memory means [col 7, ln 16-30] It would have been obvious to one with ordinary skill in the art to use the optical system to detect colors from a surface to generate first data (i.e. geographical information of the target surface), provided the target surface have previously printed color patterns to be used as references, to first map out the surface upon which a design is desired. One would have been motivated to do so to further simplify the sensing system by monitoring only one surface with minimal amount of sensors and decrease any printing misalignments (since only one surface is only being scanned, rather than having one surface being model after a smaller original surface) upon the targeted surface, where resizing of the original image can be performed (calculated mathematically) more accurately by a processing unit. In light of Saund in view of Tideman, Jr. and Suenaga, it would have been apparent that by using this optical sensing system to determine the first data, will also be used to compensate for any color features (found from the first data) to provide color information for generating second data (i.e. pinpoint desirable location for the printing heads) to print upon a surface.

It would have been obvious to one with ordinary skill in the art at the time of the invention to use a photoelectric transducer to map the surface of the target surface (generate first data) and provide color information as a supplement to reproduce a

design image on a larger surface (generating second data). One would have been motivated to do so in order to develop an easily operable and economically producible multicolor printing device [Suenaga, col 2, ln 61-63], which would minimize the number of sensing means to simplify the system [col 3, ln 5-20] and may be used upon surfaces that previously had a design that would require the system to reproduce image in the exact location in the most efficient manner by using a photoelectric sensing system that would accurately determine the correct colorant to be applied upon the surface.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 21 and 25, are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 17, 21-22 of

copending Application No. 11813009 (hereinafter '009) in view of Saund [US 2002/0171731A1] and Tideman, Jr. [US 6467978]. Although the conflicting claims are not identical, they are not patentably distinct from each other because a method of applying paint with a paint applying tool (application device having paint application elements), where fixed references marks (stationary component) are positioned; determining the position of a point relative to the surface (receiving first data of a surface) measuring the position of the displaceable part of the paint apply tool to the reference marks (measuring a position of non-stationary component relative to stationary component, the non-stationary component attached to the application device). Since the '009 does not indicate measuring the step of measuring a position would be invalid, the step of measuring a movement would not be necessitated. '009 fails to teach applying a design onto a surface of a building and controlling the paint application element by applying paint to a region which paint is not already applied. Saund in view of Tideman, Jr. teaches these deficiencies. Saund teaches a marking element (application element) is not actuated if previously actuated (wherein paint is not applied at positions already been fully painted) [0050]. Saund fails to teach painting a design upon a building surface; Tideman, Jr. teaches this deficiency. Tideman, Jr. teaches a system for painting an image on a large surface, such as the external wall of a building [abstract], where a medium head assembly is provided for delivering a medium used to create the image on the desired surface [col 2, ln 5-7] and a computer is provided to store the image and control the system [col 1, 61-67]. It would have been obvious to combine '009 with Saund and Tideman, Jr. to reproduce an enlarge image

upon a wall of a building. One would have been motivated to do so to accurately paint an image upon a large surface that would have an effective positioning system that would determine the precise location of the application device, to reduce any printing mishaps (i.e. misalignment). It would have been obvious to one with ordinary skill in the art at the time of the invention to have the application device taught by Saund be modified with the application elements (i.e. airbrushes) Tideman Jr. to paint the surface of a building. One would have been motivated to do so to develop a method that can reproduce an exact or enlarged copy of the image, text or graphic on any large surface in a quick and economical fashion [Tideman Jr., col 1, ln 35-40] which would be suitable and durable for painting the surface of an outdoor structure while being portable and maneuverable by the user, in addition to being able to detect the position of the application device in real time to effectively control and monitor the reproduction of the image on a large surface.

Claim 25 is also rejected over '009 in view of Saund and Tideman, Jr. ['009, claims 21-22].

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

1. No claim is allowed.

2. Claims 45-47 are withdrawn from restriction election.

3. Claims 39 are objected for the reasons aforementioned.

4. Claims 1-44, 48-60 are rejected for the reasons aforementioned.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MANDY C. LOUIE whose telephone number is (571)270-5353. The examiner can normally be reached on Monday to Friday, 7:30AM - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571)272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. C. L./
Examiner, Art Unit 1792

/Timothy H Meeks/
Supervisory Patent Examiner, Art Unit 1792